## REMARKS

Favorable reconsideration of this application is respectfully requested in view of the following remarks.

The claims currently pending in this application are Claims 1-17 and 19-21. Claims 1 and 19 are the only independent claims.

The claims at issue here define a method of forming a shadowgraph image of a glazing. As set forth in Claim 1, the method involves illuminating the glazing with a light source to form a shadowgraph image of the glazing on a virtual image plane, and focusing a camera onto the virtual image plane. Asset forth in Claim 19, the method involves illuminating the glazing with light from a light source to form a virtual shadowgraph image of the glazing on other than a screen, and sampling the light intensity of the virtual shadowgraph image through use of a camera.

The Official Action sets forth a rejection of independent Claims 1 and 19, and various dependent claims, based on a combination of the disclosures in U.S. Patent No. 5,694,479 to Guering et al. and U.S. Application Publication No. 2004/0174519 to Gahagan et al.

As the Official Action correctly notes, Guering et al. lacks disclosure of forming a shadowgraph image on a virtual plane or on other than a screen. The Official Action thus turns to the disclosure in Gahagan et al. This latter reference describes a method for inspecting glass substrates used in liquid crystal displays (LCDs) to detect defects. The method involves the use of a light source 14 that directs light at the glass substrate 12, and a sensor 18 that images a virtual plane 22a or 22b located at or beyond the sensor 18.

Assuming for purposes of this response that one of ordinary skill in the art would have found it obvious, as stated in the Official Action, to modify Guering et al.'s optical quality measuring method by using a shadowgraph image as disclosed in Gahagan et al., the resulting modified method would not be the same as the method at issue here. In one respect, Gahagan et al. specifically discloses that the virtual plane 22a or 22b is positioned at or beyond the sensor 18 in the manner illustrated in Fig. 1. Thus, implementing the disclosure in Gahagan et al. would have resulted in a virtual image positioned at or beyond the camera.

In contrast, the method at issue as set forth in independent Claim 1 comprises illuminating the glazing with a light source to form the shadowgraph image of the glazing on a virtual image plane located between the light source and the camera. Claim 19 provides that the virtual shadowgraph image of the glazing, which is formed other than on a screen, is located between the light source and the camera that samples light intensity of the virtual shadowgraph image.

The comments in lines 6-9 on page 4 of the Official Action observe that it would have been obvious to position the shadowgraph image at any desired place. That observation is not supported by evidence and is contrary to what Gahagan et al. describes.

Paragraph [0003] of Gahagan et al. mentions difficulties associated with detecting glass sheet defects having optical path length variations that are quite small -- on the order of a few nanonmeters. These quite small defects are low distortion defects. What this means is that sufficient distance must exist between the glass sheet and the virtual image 22a or 22b. That is, when the glass sheet 12 is illuminated by light from the light source 14, in order for the low distortion defects to

sufficiently develop a contrast enabling the defects to be viewed, the virtual image should be sufficiently far away from the glass sheet. If the virtual image is too close to the glass sheet, the low distortion defects do not have sufficient distance to develop so as to make them readily visible.

The arrangement shown in Fig. 1 of Gahagan et al. is such that the distance between the lens 20 and the sensor 16 is less than the focal length of the lens 20. This is known from the lens maker's formula. A person of ordinary skill in the art would not alter the arrangement of the parts shown in Fig. 1 of Gahagan et al. in a way that would result in the virtual image 22a or 22b being moved between the sensor 16 and the glass sheet. The reason is because that would be contrary to what Gahagan et al. describes. Altering the arrangement of parts in Fig. 1 of Gahagan et al. so that the virtual image 22a or 22b is between the sensor 16 and the glass sheet 12 would inhibit the detection of the low distortion defects because the defects would not have sufficient distance to develop. It is believed that this is the reason for Gahagan et al.'s statement that the virtual image 22a or 22b must be at or beyond the sensor 16. Gahagan et al. recognizes that in order to sufficiently develop an image of the defects that contrasts with the surrounding, the virtual image 22a or 22b must be at or beyond the sensor 16.

It is thus respectfully submitted that insufficient evidence exists to support the position that the combined disclosures in Guering et al. and Gahagan et al. would have led an ordinarily skilled artisan to carry out a method as recited in Claims 1 and 19. Claims 1 and 19 are thus allowable.

The dependent claims define further distinguishing features associated with the claimed shadowgraph image forming method. These claims are allowable at

least by virtue of the dependence from allowable independent claims. Thus, a detailed discussion of the additional distinguishing aspects of the method set forth in the dependent is not set forth at this time.

Early and favorable action with respect to this application is respectfully requested.

Should any questions arise concerning this application, or should the Examiner believe that a telephone conference with the undersigned would be helpful in resolving any remaining issues pertaining to this application, the undersigned respectfully requests that he be contacted at the number indicated below.

Respectfully submitted,

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